

Executive Summary Application Information and Proposed Partnerships

For leading human services organizations like ACDHS, their two sources of greatest capital are their people – from executives to the front line – and the informed decisions those people make, thereby making the support needed for decision makers as a key attribute. Deloitte¹ is bringing a team with a fresh human services perspective that values that capital, understands your challenges, and can help you benefit from a decision support system. Deloitte's organizational capacity to address this project is broad and deep. By leveraging our management consulting and advisory capabilities, we are the market leader in all three domains required to deliver this project: Advanced Analytics, Business Intelligence, and Health and Human Services. Deloitte is leading the nation in terms of serving our clients in commercial in healthcare with leading 'Big Data' analytics, along with market trends and changes as a result of the exponential impacts of innovation, and new idea generation. We are aligned with , a market leader in driving innovation – we bring that type of critical thinking and challenge-the-status-quo based approach to ACDHS. We offer ACDHS a broad-based partnership, bringing together a host of Deloitte professionals across . As ACDHS well understands, these domains, along with human services organizations are just beginning to explore the use of advanced analytics in addressing key performance issues and problems, and ACDHS is at the forefront. Given what is at stake, we offer new face of Deloitte to ACDHS, with leadership from Decision Support Issue to Be Addressed: Our predictive modeling approach is flexible and scalable; it can be used to answer a broad range of questions posed by DHS. Description of the Proposed Solution(s):

Funding Request: As discussed in our budget submission, our proposed budget for this project is

Deloitte 1. Executive Summary Page 1-1

¹ About Deloitte

2. Narrative

RFP Reference: 2. Narrative, Page 8

Organization(s) Description

1. History and experience conducting research, translating research into practice, developing/validating tools built on research, developing and implementing predictive models.

Deloitte brings a management consulting perspective with breadth and depth of experiences in research, enabling research into solutions, validation of tools and implementing predictive models. We bring Allegheny County DHS a team of experienced practitioners comprised from the three key practices, as illustrated in the graphic below, required to build a data-based decision support system:

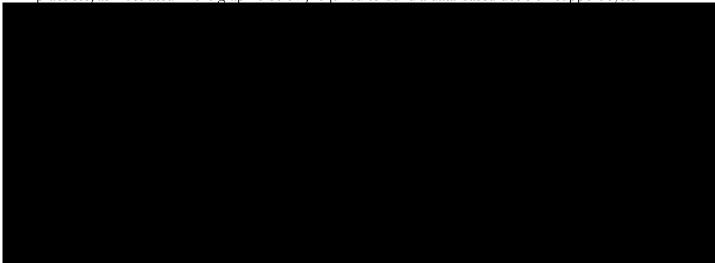


Figure 1. Deloitte Team Capabilities Meeting ACDHS needs

Deloitte brings depth and breadth in the core capabilities required to support Allegheny County DHS.

Our integrated team offers Allegheny County DHS:

- the ability to use research to delve into critical business questions and issues
- the expertise to use that knowledge during the exploration and mining of data and building of the predictive model
- the capability to translate the information and insights gained into decision support tools and processes that your caseworkers will trust and use to do their job.

We have a network of experienced practitioners with management consulting experiences who span across the analytics continuum – including

These advisors have experience with state and federal governments, private sector, and non-profit research institutions.

| Our experience in implementing predictive analytic solutions to public sector challenges. Examples of o | |
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| The decision support tools that we create enable or outcomes for their clients. For example, | ar clients to streamline operations and improve |
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For details on the projects above or additional examples of our work leveraging research and analysis to create business intelligence tools and predictive models, please refer to Appendix A.

2) Describe relevant experience in working with human services practitioners (including government analysts, clinicians, social workers, leaders).

RFP Reference: 2. Narrative, Page 8

With each project we deliver, we build upon our experiences by sharing information with our clients and developing best practices that we integrate with our health and human services practice nationwide.

Our delivery team understands your point of view because we have worked with social workers, clinicians, research analysts, and leaders across many HHS organizations. We have gathered insight and best practices; we have gained an understanding of what is required to move ideas into practical solutions that have relevant business impacts.



On any given day we have staff in numerous HHS offices, at both county and state levels, working collaboratively with caseworkers to turn our recommendations and guidance into action. We have seen the constant pressures that HHS workers face, balancing policy and program requirements all the while with a client, who may be in crisis, sitting across from them. We are practical and pragmatic; we own the problem as much as we own the solution and we share what works and what does not seem to be working – understanding that, in HHS, our actions are making a contribution to meaningful outcomes for a vulnerable population. The following figure illustrates the depth and breadth of our experience in the HHS domain.

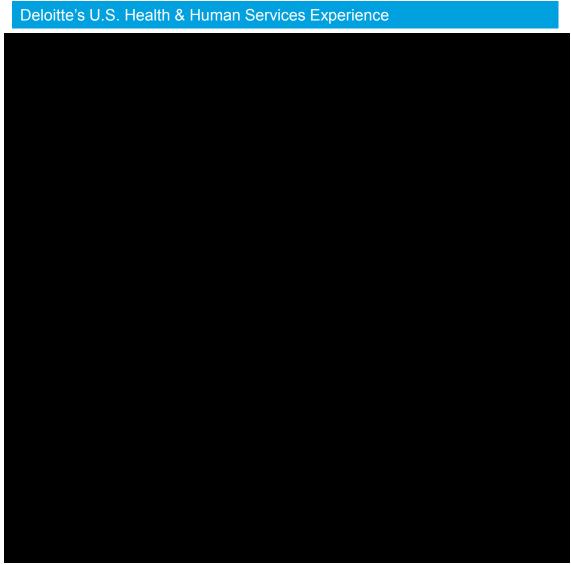


Figure 2. Deloitte Health and Human Service Experience. Deloitte brings a wide range of experiences across the county.

Our team also brings insight and expertise from our experience working with government leaders from across the country. Many of our Deloitte leaders spend time at national conferences as presenters and as participants and in visioning/strategy sessions with State and Federal HHS leaders to share insights and ideas about the current landscape and future of HHS.

Our work with government leaders helps us understand key business drivers and we recognize that data analytics is a critical game changer for how human services are delivered.

We have developed many partnerships with leaders while working together, which expands our knowledgebase, expertise and pool of resources to leverage for guidance and advice. Our experience working with front line staff, social workers, clinicians, analysts and leaders from projects

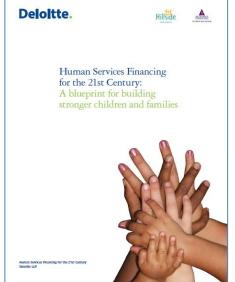
and nationwide initiatives, provide our team with knowledge, insight and understanding that is unmatched. We bring these experiences, our deep pool of resources and expansive network of HHS leaders to Allegheny County DHS.

3) Describe any collaborative projects on which your organization worked, naming partner organizations.

RFP Reference: 2. Narrative, Page 8

Our Deloitte team has extensive experience successfully completing collaborative projects across our organization.

This research collaborative focused on the key challenges these individuals face as well as outlined a strategy of improvements to implement based on research and information in order to improve their lives.



Each of these initiatives represents our desire to help improve the human services landscape in an ever challenging environment. We provide organizations with support from our skilled practitioners, proprietary tools to help them further their objectives in developing stronger urban communities, teaching financial literacy, and providing care to those in need.

4) Describe the way your organization or collaboration would manage the process of working with Allegheny County DHS to design and implement decision support tools and predictive analytics.

RFP Reference: 2. Narrative, Page 8

Building and implementing a decision support system (DSS) that leverages predictive analytics is a highly collaborative process. It is the deep understanding of the problem space that drives the analytics. While our team includes a number of HHS advisors who contribute to that understanding, we recognize and expect that ACDHS is also key contributor to that understanding. As such our team will work alongside ACDHS during the entire process. The following table highlights some of the activities that will be performed in a collaborative manner with ACDHS:

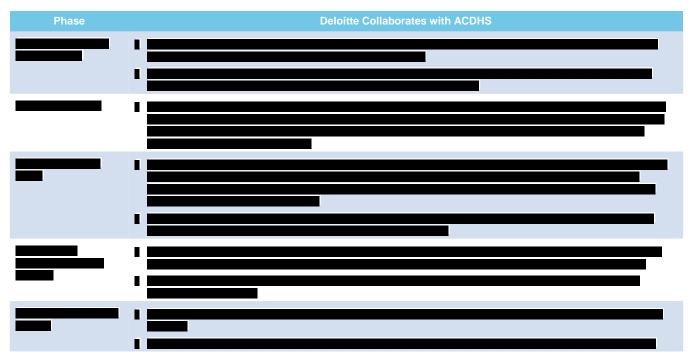
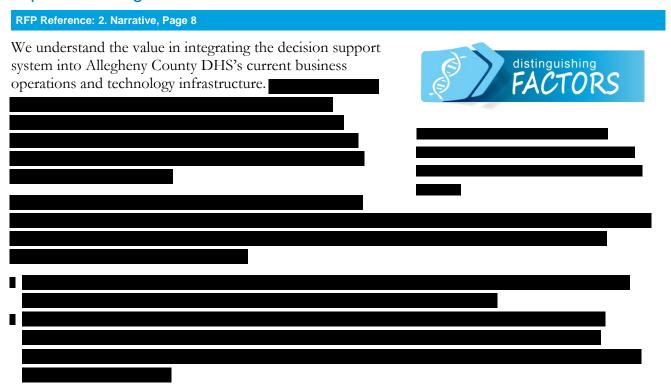


Figure 3. Collaboration Activities.

5) Describe experience or approach to working with an existing IT vendor to implement/integrate solutions.





Based on our experience implementing analytics solutions and integrating them into existing technology infrastructure, we have identified below examples of key technology integration activities needed to deliver an end-to-end analytics solution.

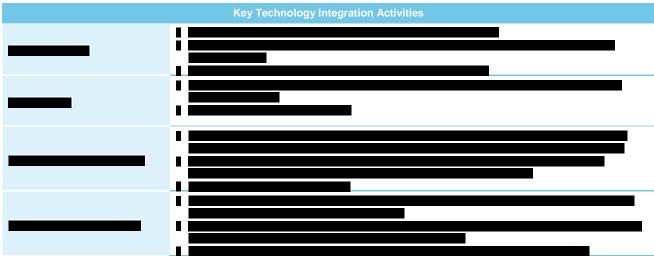


Figure 4. Key Technology Integration Activities.

Allegheny County DHS benefits from the combination of our experienced technology team on the ground today with our expertise performing analytics/technology integration activities in end to end solutions.

Project Description

RFP Reference: 2. Narrative, Page 8

1) Identify project goals and objectives.

We understand that Allegheny County DHS is seeking the development of tools to support better decision making in child welfare, homeless services, behavioral health, and criminal justice services. Answering key questions in these human service domains, a number of which you identify in the RFP, and then translating those answers into tools your workers can use, will offer significant opportunities to ACDHS to focus its efforts and interventions most appropriately. Additionally, your requirement that any work complete as part of this effort be made available in the public domain also means that Allegheny County DHS is making a significant contribution to the human services



Deloitte offers an end-to-end solution for Allegheny County DHS:

- A leading process for predictive modeling that can be used for any topic
- Support from numerous subject matter experts in the field of human services
- Flexible options for a decision support tool

field nationally.

Based on a careful review of your RFP we have identified the following goals and objectives for this effort. We have designed a proposed project approach that addresses these goals and objectives. During the early stages of the project we validate these goals with you and adjust as needed:

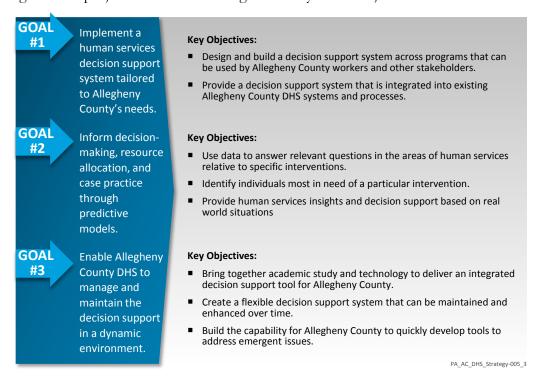


Figure 5. Proposed ACDHS Project Goals & Objectives.

These proposed project goals and objectives will be validated and adjusted with Allegheny County DHS at the start of the engagement

These are ambitious, yet we believe, achievable goals for this important project. County, state, and federal-level human service agencies are realizing the value of data and are investing in developing analytics capabilities across the various human services domains. The Analytics Maturity Stages model described in Figure 6 articulates a future vision for Allegheny County DHS. We believe that with the implementation of this project, ACDHS will transition into the stages defined more by "Knowledge" and "Insight and Foresight" and less by "Data" and "Information."

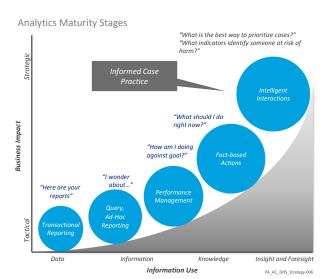
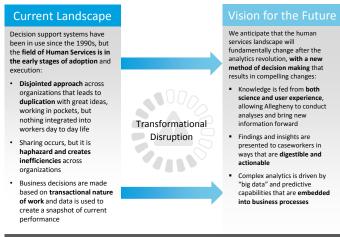


Figure 6. Analytics Maturity Stages.

The implementation of a decision support tool system based on predictive analytics will enable ACDHS to make better decisions faster and act on them to mitigate risks, forecast problems and improve performance.

Shifting to the *Intelligent Interactions* stage in the Analytics Maturity Model means that a human services organization is running their organization and operations based on *Informed Case Practice*. Such a shift across the entire human services spectrum has the potential to be an incredible and powerful force – what we call a 'transformational disruption.' We believe this project as we envision it, has the potential to be a transformational disruption for Allegheny County DHS and other human services agencies across the nation.

2) Describe in detail the service(s)/consultation to be provided.



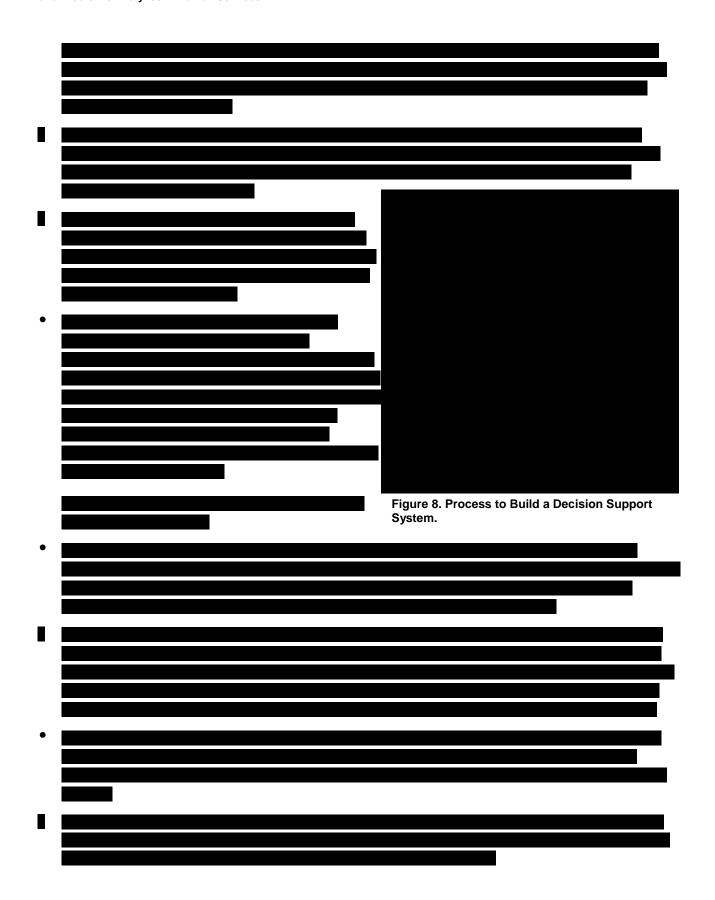
DHS is looking for the right team to transform its use of decision support tools and predictive analytics in order to help people to make better decisions faster and act on them to mitigate risks, forecast problems and improve performance.

Figure 7. Transformational Disruption.

The implementation of a decision support tool system based on predictive analytics will enable ACDHS to make better decisions faster and act on them to mitigate risks, forecast problems and improve performance.

| RFP Reference: 2. N | arrative, Page 8 | | | |
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| Bas | sed on our understanding of Allegheny County DHS's needs we propose the initial development of end-to-end model within a decision support system. |
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Overview of Proposed Services

The proposed project services that will enable us to build a decision support system are captured in the process flow illustrated below:



As discussed earlier, we propose executing these steps for two business problems as part of this initial project. For illustrative purposes, in our proposal we have selection the two business problems at the near top of your list, specifically:

- Which child welfare placements are most likely to disrupt?
- How can we predict which unifications are most likely to disrupt?

In the following section we provide our detailed approach for these 7 key areas of services, including activities and deliverables.



Implementation and Change Management Support

Incorporating the use of a decision support system into a human services environment can be difficult; case workers may not trust information if they do not understand how the data is being calculated. Our experience is that stakeholders need to get progressively get comfortable the decision support systems, the data that goes into it and comes out of it and the meaning of the data. Once they have this comfort level, their ability to act on insights supports the overall process. To support the successful implementation of a decision support tool, we will prepare communication materials and work with ACDHS to define the process for its use.

Subject Matter Expertise

There are two aspects to the subject matter expertise. The first aspect revolves around business and domain knowledge – that is, knowledge of human services. With the wide range of subject matter experts on our team, Deloitte brings experience ranging from child welfare to poverty to disability services, as well as other health and human services programs.

The second aspect revolves around deep technical knowledge and expertise in the end-to-end process of building decision support systems. Deloitte's Advanced Analytics and Modeling practice has 18+ years of experience in providing end-to-end solutions. These solutions include the building of predictive models and integrating them into decision support system and rolling them out to produce meaningful actions and results for many large clients. The practice has over 80 Ph.D.'s and MBAs and advanced degree personnel who solely focus on solving most complex problems using advanced and predictive analytical techniques as a means.

Ongoing Maintenance

Deloitte has a variety of application support and maintenance options and is flexible in its approach. Deloitte works with the business, analytics and IT teams to better understand what makes sense. For example Deloitte could potentially transfer knowledge to in-house teams which will do on-going maintenance or Deloitte and ACDHS can enter into an application support option agreement. In this engagement, Deloitte will primarily focus on building and implementing a predictive model and building a decision support system. Should ACDHS choose to do so, Deloitte will discuss ongoing maintenance at an appropriate time.

3) Describe how the program will be integrated with other information technology and tools.

RFP Reference: 2. Narrative, Page 8

Deloitte will work closely with Allegheny County DHS to identify the inputs, outputs, process for decision-making and the visual display that will best enable staff to make data-informed decisions. We have a long relationship with ACDHS and will use our deep knowledge of ACDHS's human services programs and data infrastructure, including the Data Warehouse, to design, install and configure the tool and technology required to build the decision support system around predictive modeling.

The existing Deloitte systems integration team will be leveraged for due diligence and will

serve as an accelerator to enable the decision support system within the agency's data systems, following the necessary software development life cycle processes and standards.

Solution Tool Set

We recognize that ACDHS currently uses Oracle for the database and Cognos for its reporting purposes. Cognos is a Tier 1 tool with the ability to handle large volume of enterprise data with high performance, which aids in testing and analyzing results in an efficient and effective manner.

However, we understand ACDHS is open to new proposals that suggest an entirely new construct for the way ACDHS thinks about the decision support tool. Besides Cognos, there are tools, such as Tableau and Qlikview, which are widely recognized in the industry for their ability to provide outstanding and intuitive visualizations. In addition, Deloitte has also implemented solutions built on open source tools like SEMOSS and IRIS for our federal and state clients. With our vast experience across a number of reporting tools, Deloitte is uniquely positioned to assist ACDHS in evaluating and determining the tool of choice and to deliver the solution regardless of the tool selected. The table below provides a quick snapshot of the key differentiators of some of the tools that can be used by ACDHS as part of their decision support system.

| | COGNOS | QlikView | Tableau | SEMOSS | IRIS |
|---------------------|---|---|--|---|---|
| | AN IBM COMPANY | Q QlikView | ‡‡+ableau | SEMOSS | Solr |
| Description | IBM Cognos Business Intelligence provides reports, analysis, dashboards and scorecards capabilities. Cognos Bl includes a variety of product suites to address key reporting needs • Metric Studio • Analysis Studio • Business Insight • Report Studio • Framework Manager | OlikView is a Business Discovery platform that enables businesses to make innovative and relevant decisions based on associations in data. QlikView facilitates real time collaboration via social decision making. It also allows for mobile access to analyze and capture data. | Tableau is an easy to use data visualization program that utilizes drag and drop functionality for fast and easy modeling. Tableau is based on a new data architecture called VizQL that provides a user friendly interface. | SEMOSS is a standards based open-source, collaborative, context-aware analytics tool that helps the users explore data and associated metadata enabling them to the "right questions of their data." SEMOSS does this by combining disparate sources of data with the "fit-for-purpose" analytics, elastic data and rich visualizations that enables evidence-based decision making. SEMOSS utilizes RDF SPARQL (W3C standard) to model and mine data | IRIS is real-time MDM-like solution used to match citizens across different systems. It helps achieve more holistic view of citizens and serves as foundation for: Operational dashboard (BI) to improve case worker performance Predictive modeling to improve case outcome |
| Key Differentiators | Product Quality: Cognos 10 addresses key limitations of Cognos 8 including query engine enhancements, active reports. Mobile Analytics: Provides insight on various mobile | Ease of Use: Easy to use and intuitive for end-users to conduct data analysis/ data discovery activities. Performance: In memory capabilities provide faster run times when compared with other leading | Ease of Use: Smallest learning curve to begin analysis, with easy dashboard creation and deployment— easy to replicate MS Excel functionality. Prebuilt Tools: Many custom | Federated Data: SEMOSS is the first analytics environment that link and collate disparate data. This feature allows combining internal enterprise data with external industry data with ease Collaborative Analytics: SEMOSS allows packaging insights for collaboration. This is particularly useful when stakeholders want to share a | Inexpensive: No licensing cost as IRIS is built from 100% open source technologies (Lucene, Solr) High Performance: The solution is linearly scalable and uses industryleading search engine algorithms |

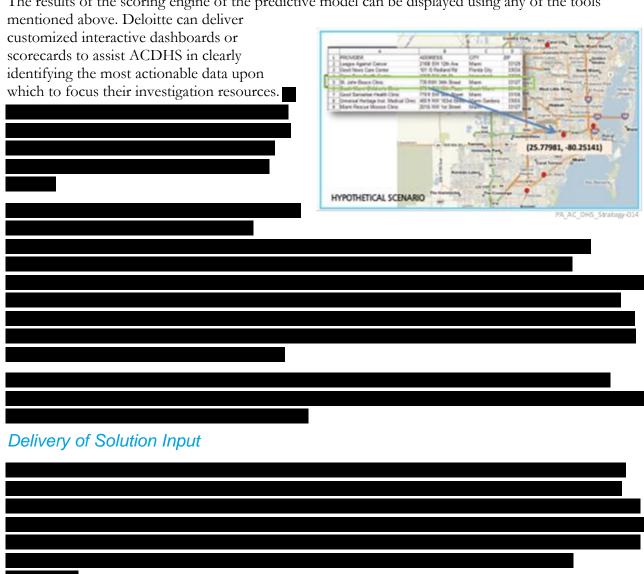
| COGNOS | QlikView | Tableau | SEMOSS | IRIS |
|---|--|---|---|---|
| technologies with a rich, interactive BI user interface. • Enterprise BI Suite: BI suite provides a series of reporting tools to develop/ deliver a wide array of reports. | BI products Data Integration: QlikView integrates with a variety of data sources including excel, access, SQL and Teradata. | widgets, tools, and functions to accelerate development timelines. • Visualizations: Quick to deploy with rich visual outputs/data features. | visualization, data and/or analytics • Metadata at the core: SEMOSS's use of RDF and ontologies provides context to the data, allowing much quicker and holistic interpretation of data. | Customizable: IRIS can be tuned to fit differing needs due to open source |

Figure 17. Comparison of BI Tools.

Deloitte is uniquely positioned to assist Allegheny County DHS in determining the tool of choice and to enable the solution for any of the solutions listed

Delivery of Solution Output

The results of the scoring engine of the predictive model can be displayed using any of the tools



4) Provide a timeline for design and development.

RFP Reference: 2. Narrative, Page 9

We propose an approximately timeline for scope of services included in our proposal.

The high-level Gantt chart illustrates the tasks and activities against a weekly timeline.



Figure 19. Timeline for Design and Development.

5) Provide examples of tools/systems already developed.

RFP Reference: 2. Narrative, Page 9

Please see appendix for details.

6) Describe the staffing plan:

RFP Reference: 2. Narrative, Page 9

Deloitte brings a team ready to support the Allegheny County Department of Human Services (ACDHS) in building a decision support system leveraging predictive analytics. The combination of Deloitte's **Advanced Analytics and** Predictive Modeling (AAM) practice together with our **Information Management** practice, supported by national human services researchers and practitioners from the and Deloitte's Health and Human Services practice, enables us to provide a full "endto-end" decision support system that will enhance ACDHS's experience with data to improve the services delivered to its consumers.

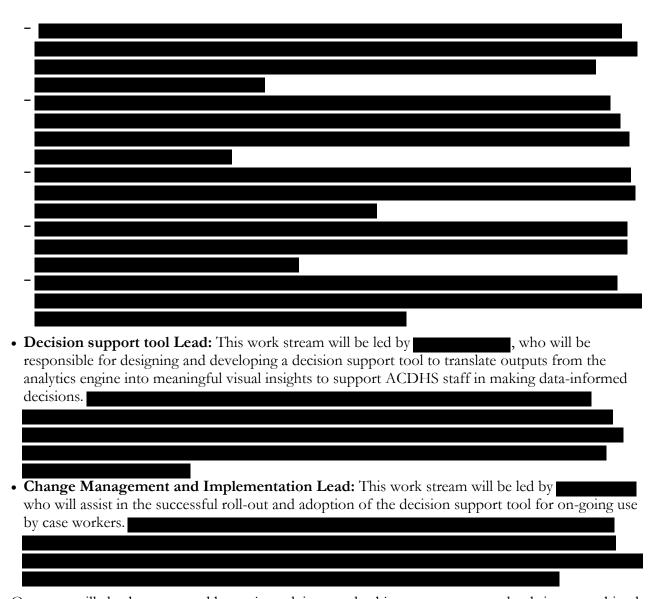
The project's lead executive will be will be

Team Organization Structure

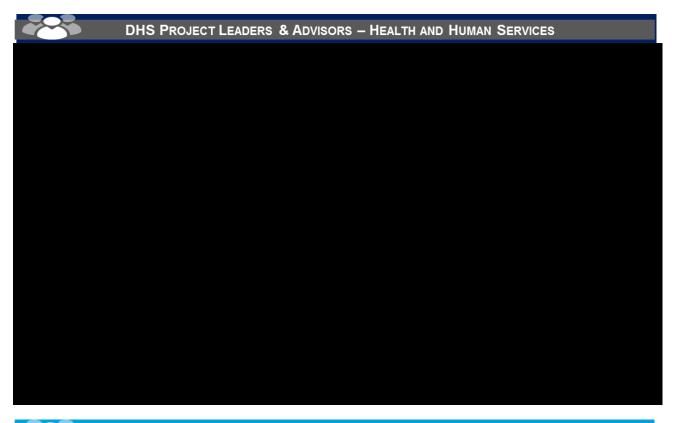
Figure 20. Team Organization Structure chart.

supported by a set of senior advisors who are eminent in health and human services and advanced analytics and knowledgeable about Pennsylvania human services programs. The day to day work will led by who brings over 10 years of experience in advanced and predictive data analytics and Decision Support systems, with a demonstrated expertise in Bayesian statistics and Business Intelligence tools. The has experience leading engagements in which he built predictive models and dynamic visualization tools that provided executive decision makers at various organizations key insights to optimize and drive their on-going strategies. We will coordinate day-to-day project activities and will oversee three work streams we identified that correspond to the areas of support requested by ACDHS as outlined below.

• **Predictive Modeling Support team:** This team will produce a predictive analytics engine to identify the most significant predictors in child placement disruptions and reunifications. will be supported by the following team members:



Our team will also be supported by project advisors and subject matter experts that bring a combined experience of over 120 years in Human Services and Data analytics. As outlined in the chart below these advisors are nationally renowned senior thought leaders that will provide expert input into every phase of the project and ensure that industry best practices are adopted to assist ACDHS achieve its goals.



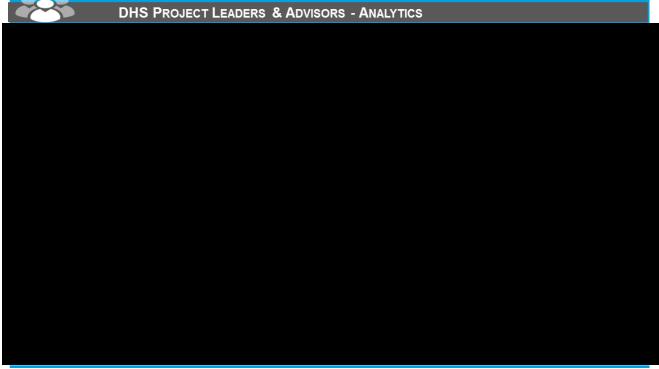


Figure 21. Allegheny County DHS Project Advisors.

Deloitte brings a team that is poised to innovate and revolutionize how data is transformed and consumed to provide front-line, supervisory and leadership staff at ACDHS a reliable and flexible Decision Support Tool to ensure that the most optimal outcomes for its consumers are realized.

References

RFP Reference: 2. Narrative, References, Page 9 1. Include name, affiliation and contact information for three references. 2. References should be able to address experience with your organization that is relevant to the proposed project.

Please see appendix for detailed project descriptions.

Deloitte accepts in principle the contract terms and conditions as referenced in the RFP as drafts of certain provisions of a contract, the final terms of which will be negotiated by DHS and Deloitte if we are chosen for negotiations. We recognize that, as with all complex engagements, there will be certain clarifications to the requirements in the RFP that the parties may wish to negotiate prior to initiation of the project, based on the requirements of the engagement as finally awarded. DHS and Deloitte have successfully reached agreement on terms and conditions in the past and in the event selected, we are committed to working in good faith with the DHS to reach prompt agreement on the final terms applicable to this project.

3. Budget and Budget Description

| Project Component | Fixed Price |
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3. Budget and Budget Description

RFQ Reference: 3. References, Page 9

Please provide a budget that shows the cost per line item, any matching funds, total expenses and total revenues. Include a budget narrative that explains the purpose of each line item and how amounts were calculated. The budget should clearly relate to the Narrative.

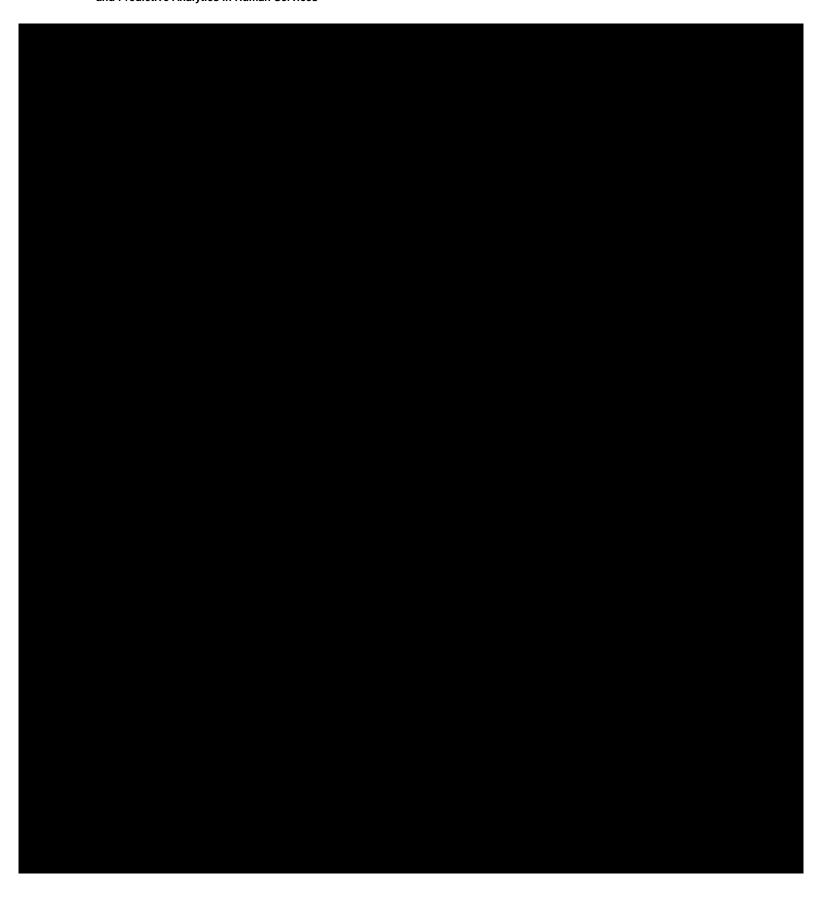
We are proposing a fixed price structure to this engagement. To assist ACDHS in evaluating our proposal we have broken those fixed prices into separate components.

| Project Component | Fixed Price |
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These prices are inclusive of limited expenses, required only when team members are working on-site directly with ACDHS.









Large Retail Corporation – Claims Subscription Analytics

| Project | A large retail corporation, with operations throughout the US, that self-insures its workers' compensation |
|---------------------|--|
| • | liabilities wanted to utilize advanced analytics to improve the claims handling process to help return |
| | claimants to work sooner and reduce loss costs. Specifically, it wanted to: |
| | Design and implement a predictive model to score each workers' compensation claim |
| | Identify claims with high severity potential early in the assignment process |
| | Provide actionable output that could be used to get the right resources to the right claims sooner |
| Project Description | A customized predictive scoring tool that performed claims subscription analytics on workers' claims was |
| | developed. It's key features included: |
| | A severity potential score between 1-100 based on the individual's historical claims data. The too |
| | grouped the scores according to pre-defined categories and variables (medical only, indemnity |
| | etc.) and provided an assessment of the risk of that claim |
| | Reason messages which helped the Claims Supervisor at the First Report of Injury (FROI) to |
| | develop a comprehensive action plan |
| | Different types of reports based on management level which enabled monitoring of claims, |
| | adjustment of staffing levels based on volume of claims, quarterly performance summaries and |
| | tracking performance of claim owners |
| Results Achieved | By building the tool into the existing claims process, the corporation was successfully able to: |
| | Identify claims that had the potential to be more severe in exposure |
| | Match claim complexity with appropriate claim resources at First Report of Injury (FROI) |
| | Use medical management more efficiently to provide timely and appropriate medical care to return |
| | claimants to work as quickly as possible |
| | Identify potential fraud, claims that require oversight and changes in claim activity that warrant |
| | earlier escalation |

Figure A-8. Claims Subscription Analytics.

Global Pharmaceutical Organization – Advanced Sales Analytics

Project

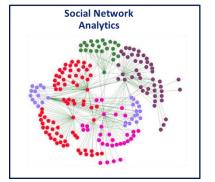
A global pharmaceutical organization wanted to improve its sales force effectiveness by gaining better insights into their customer base – patients, payers and physicians. The company was looking to improve customer targeting by answering the following:

- · Are we contacting the right customers?
- What are our most profitable territories?
- Who are the most and least effective representatives?
- How does representative performance tie to script writing patterns in the territories?

Project Description

The company adopted a two-pronged analytics approach which involved:

- Social Network Analysis: Analysis of sales
 representative performance as tied to the company
 territory's business model was to establish the
 connections between customer's core attributes and
 connections to other customers (self-organizing
 mapping).
- Customer Insight and Business Planning Tool:
 Using advanced customer targeting algorithms in



SAS and R, the Customer Insight and Business Planning tool provided a visual correlation between the pharmaceutical business model, script writing patters and representative's knowledge of their customer base. The tool utilized historical sales data, representative data and results from the Social Network Analysis. This tool, available to the representatives in a spreadsheet application, enabled representatives to gain significant insights into their customer base and make data-driven and effective product marketing decisions.

Results Achieved

Using the insights from the social network and customer insight, the organization was able to:

- Enable broad representative participation in new product launch and development and datadriven decision making by better understanding market requirements and segmentation
- Identify and reward the most effective representatives boosting employee morale and increasing productivity
- Experience over 10% growth in sales from new customer calls and call frequency

Figure A-9. Advanced Sales Analytics.

Large Insurance Company – Lifestyle Based Analytics

| Project | A national insurance company was experiencing significant increase in both – life insurance lapses and | | | |
|---------------------|--|--|--|--|
| | annuity insurance lapses – due to increased competition in the marketplace and changes in external factors | | | |
| | which ultimately resulted in a loss of revenue. The company wanted to develop a solution that performed | | | |
| | analysis using internal and external data to reassess the existing health status categories and ultimately | | | |
| | reduce lapses and improve retention. | | | |
| Project Description | A lifestyle based retention analytics tool was developed using Regression Analysis, Cluster Analysis and | | | |
| | Factor analysis. The tool appended over 2,000 third party variables to develop two dimensional models that | | | |
| | looked at both – probability of a customer to lapse and the expected future value of that customer. The tool | | | |
| | was integrated with the company's database and third party sources at the back-end to perform cross | | | |
| | functional analysis. | | | |
| | For life products that meant comparing the policy issued underwriting category to that individual's | | | |
| | specific change in health status | | | |
| | For annuity products it was focused on an individual's probability to withdraw funds and become | | | |
| | an income taker | | | |
| | The tool also combined retention models with health risk models, allowing the company to refine retention | | | |
| | programs to evaluate the customer lifetime values. | | | |
| Results Achieved | Using the tool, the company was able to: | | | |
| | Define the changing individual mortality risks on individuals who were originally underwritten 5, 10 | | | |
| | or even 15 years ago | | | |
| | Identify 20% of a specific population segment whose new health status were at least two | | | |
| | categories worse than where they had been originally underwritten | | | |
| | Uncover 10% of the customers whose propensity to lapse was 350% higher than the average rate | | | |
| | - Oncover 1070 of the customers whose properties to tapse was 30070 higher than the average rat | | | |

Figure A-10. Lifestyle Based Analytics.

Global Original Equipment Manufacturer – Warranty Claims Analytics

| Project | An Automotive Original Equipment Manufacturer's (OEM) warranty claims adjudication process relied | | | |
|---|---|---|--|--|
| | heavily on manual reviews and static rules. The automaker needed a more scientific approach to | | | |
| | adjudication to help identify potentially fraudulent or false activity in a more efficient, automated manner. | | | |
| Project Description | The Warranty Claims tool | Warranty Claims | | |
| | merged data from multiple | Analytics | | |
| | sources – both within the | | | |
| | company and external credit | Predictive Analytics Early Warning Detection Simulation Analytics | | |
| | report sources – and applied | Warranty Database | | |
| | the following advanced | Dealer Networks | | |
| | modeling techniques: | Dealer Partners Dealer Partners | | |
| | Decision Trees | Sales Parts Service Parts | | |
| | Association Rules | Service Parts | | |
| | Logistic Regression | | | |
| | Benford Analysis | | | |
| | iques, the tool produced five sets of rules to automatically identify | | | |
| | potentially false or inaccurate claims | s without manual interaction. | | |
| Results Achieved | Using the tool, the client was able to review over 16 million claims through an automated scientific method | | | |
| | and improve its processing efficiency thereby reducing customer wait times | | | |
| | By identifying fraudulent or inappropriate claims early, the OEM was able to save on operation | | | |
| | costs and increase workforce efficiency. The ROI benefits were three times larger than initial | | | |
| | expectations | | | |
| | As an additional benefit, the rules were able to identify inconsistencies between labor operations | | | |
| | and replacement parts and map parts to pre-approved labor operations. | | | |
| This has drastically reduced the need for manual reviews on claims and could significantly increase | | | | |
| | warranty processing efficiency for the OEM. | | | |

Figure A-11. Warranty Claims Analytics.

Life Insurance and Financial Service Provider – Predictive Analytics

Project

A leading life insurance and financial services provider wanted to diversify its profitability portfolio by increasing sales of new products to existing customers. In order to accomplish this, the first step was to identify in-force customer segments that were most likely to need and qualify for additional life insurance. In addition to using predictive models to identify these customer segments, the provider also wanted to validate that a similar methodology could be applied to predict how individuals are likely to exhibit other specific behaviors, ultimately increasing the up-sell potential.



Project Description

The solution involved the development of a predictive model tool and its business validation:

- Predictive Model Tool: A predictive model tool was developed which took inputs from the
 insurance and financial service provider client in addition to external third-party lifestyle data and
 applied a predictive algorithm to calculate the likelihood score of an existing customer to need
 additional life insurance. The scoring tool was integrated with the provider's IT system and thirdparty sources to perform on-demand scoring. It also predicted the likelihood of the customer to
 qualify for additional life insurance by utilizing a decision support system (business rules engine).
 Using these two values, the provider was able to identify and further segment its target customer
 hase
- Validation and Reasonability: After the analysis and identification of the customer base, underwriters validated business situations by performing a comparison of cases in which the algorithm assigned poor health risk scores to applications issued in the "Super Preferred" risk class through the traditional underwriting process

Results Achieved

Using the tool, the provider was able to:

- Effectuate application triage efficiency gains and enhance accuracy checks
- Better understand its current and potential customer base
- Model customer propensity to utilize or respond to certain products, value-added services or offerings
- Data mine to identify new opportunities for in-force cross-sell

Figure A-12. Life Insurance Predictive Analytics.

National Membership Based Insurer – Lifestyle Based Analytics

| Project | A national membership-based multiline carrier was interested in keeping the customer continually happy. | | |
|---------------------|---|--|--|
| | One issue that was repeating itself was cross selling of life insurance products. When a property/casualty | | |
| | (P&C) insurance customer or banking customer contacted the call center for routine service, they were often | | |
| | cross sold a life policy at the same time. However, many times a happy customer turned into an unhappy | | |
| | customer after going through the invasive life underwriting process just to find out they were declined or | | |
| | offered substandard rates. Hence, the P&C unit stopped the cross sell of life products to their customers | | |
| | until it could establish a scientific approach to solve this problem. | | |
| Project Description | By using primarily publically available third party marketing data with limited internal customer data, a | | |
| | lifestyle based analytic tool was built which applied algorithmic solutions that determined which customers | | |
| | were likely to have poor mortality risks and thus likely to be declined or substandard. The algorithm used | | |
| | Regression Analysis, Cluster Analysis and Classification and Regression Trees (CART) on the internal | | |
| | customer data and third party variables to predict the customers with poor mortality risks. The output, | | |
| | available through visual on demand reporting, was then used by the P&C unit to determine the customer | | |
| | segments to which cross-selling of products could be allowed. | | |
| Results Achieved | By utilizing the tool, the insurance company was able to: | | |
| | Segment the population of people who scored in the highest 20% of the mortality risk models, | | |
| | thereby removing 80% of the eventual declines | | |
| | Restart its process of cross-selling and up-selling through its P&C unit to the targeted customer | | |
| | segment, enabling creation of a revenue stream and increasing its overall profitability | | |

Figure A-13. Lifestyle Based Analytics.

Medical Professional Liability Insurance Company - Predictive Modeling

| Project | A medical professional liability (MPL) insurance company wanted to optimize its allocation of office practice evaluation (OPE) resources towards physicians and office practices. It wanted to focus on risk underwriting and patient safety by implementing a predictive modeling solution to help identify the most risk-prone physicians and offices. | | |
|---------------------|--|--|--|
| Project Description | A predictive model solution was created which: Utilized advanced analytics and multivariate regression analysis (Regression Analysis, Linear Model Development and Interactive Graphical Exploratory Data Analysis) based on the relative risks posed by the various individual physicians to identify the most risk-prone physicians Provided an evidence-based approach to risk management and patient safety by automatically categorizing risk and assisted the MPL underwriters in understanding complex risks and underwriting logic | Predictive Modelling Data Collection Abstraction Analysis Modelling Hypothesis | |
| Results Achieved | Adopting the enterprise-wide use of the modelling solution • Develop predictive models demonstrating signif | n, the MPL insurance company was able to: icant lift – with less than 40% lower loss ratio in the | |

best 10% of premium and more than 50% higher loss ratio in the worst 10% of premium

Identify nearly 40% of RMF's medical professional liability claims which were associated with 10%

of the physicians with the worst scores

Figure A-14. Medical Professional Liability – Predictive Modeling.

Resumes Appendix B

RFQ Reference: 2. Narrative, Page 9

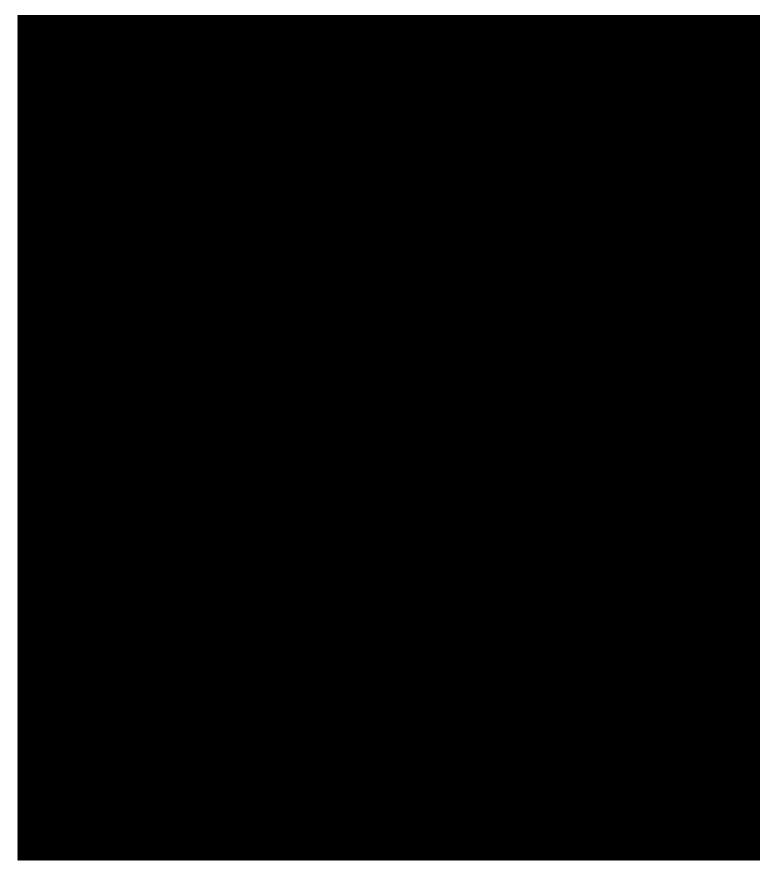
Attach copies of the résumés of staff that will be providing services. (include in appendix, does not count against the 25 page limit)

We are pleased to present to the Allegheny County Department of Human Services the resumes for our team. The following table highlights the individuals and their respective project roles.

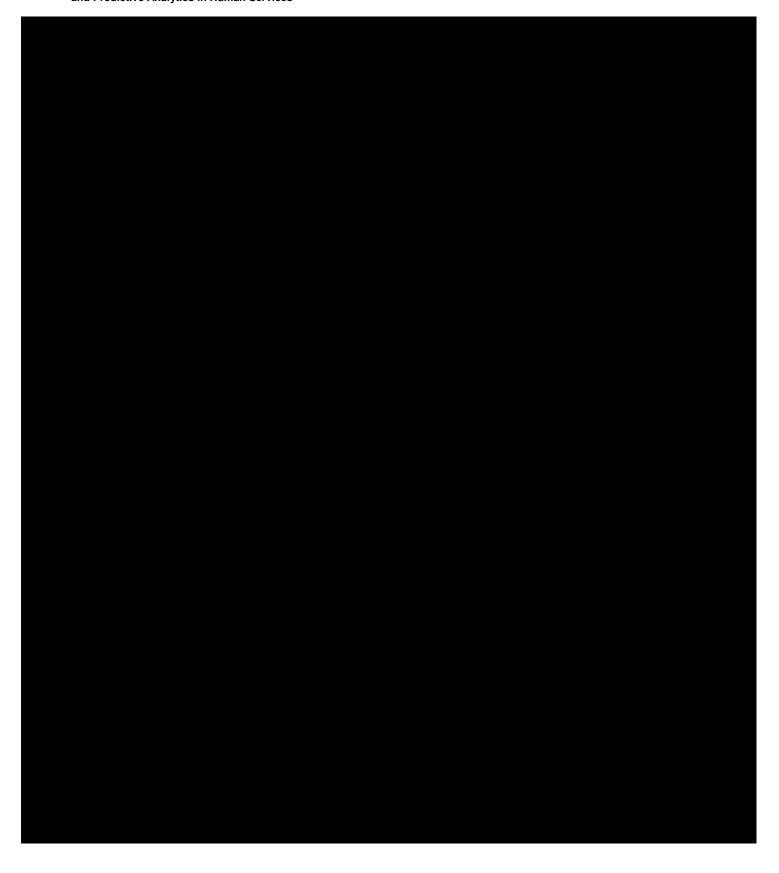
| Name | Role |
|------|---|
| | Executive Sponsor and Health and Human Services Advisor |
| | Project Manager and Predictive Modeling Lead |
| | Decision Support Tool Lead |
| | Change Management and Implementation Lead |
| | Predictive Analytics Modeler |
| | Predictive Analytics Modeler |
| | Scoring Engine Developer |
| | Scoring Engine Developer |
| | Predictive Analytics Modeler |

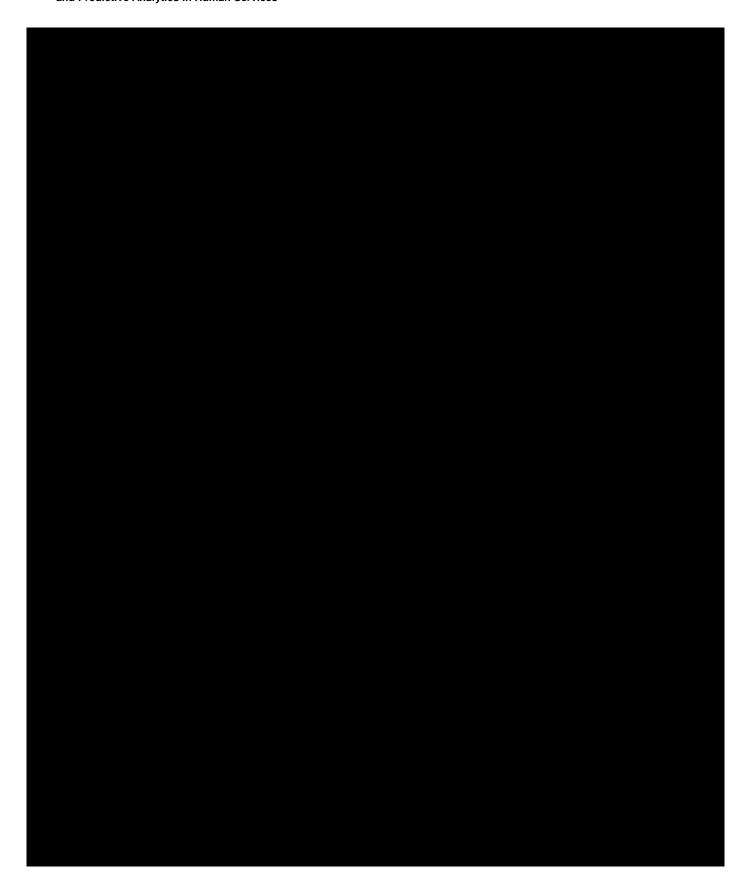
In addition, we are pleased to present bios for our advisory team members. This is a representative sample of the diversity of skills that we can bring from our Deloitte firm and proposal partners.

| Name | Role |
|------|--|
| | Health and Human Services SME |
| | Child Welfare SME |
| | Decision Support Tool Advisor |
| | Decision Tool Implementation and Change Management Advisor |
| | Predictive Modeling Advisor |
| | Predictive Modeling Advisor |
| | Predictive Modeling Advisor |
| | Predictive Modeling Advisor |
| | Quality Assurance Advisor |

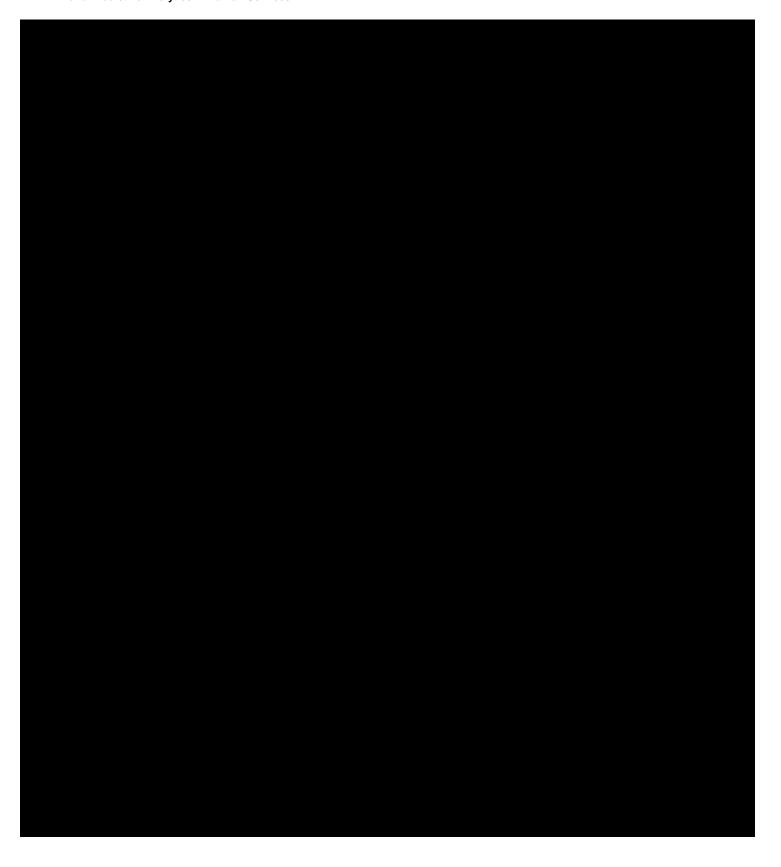


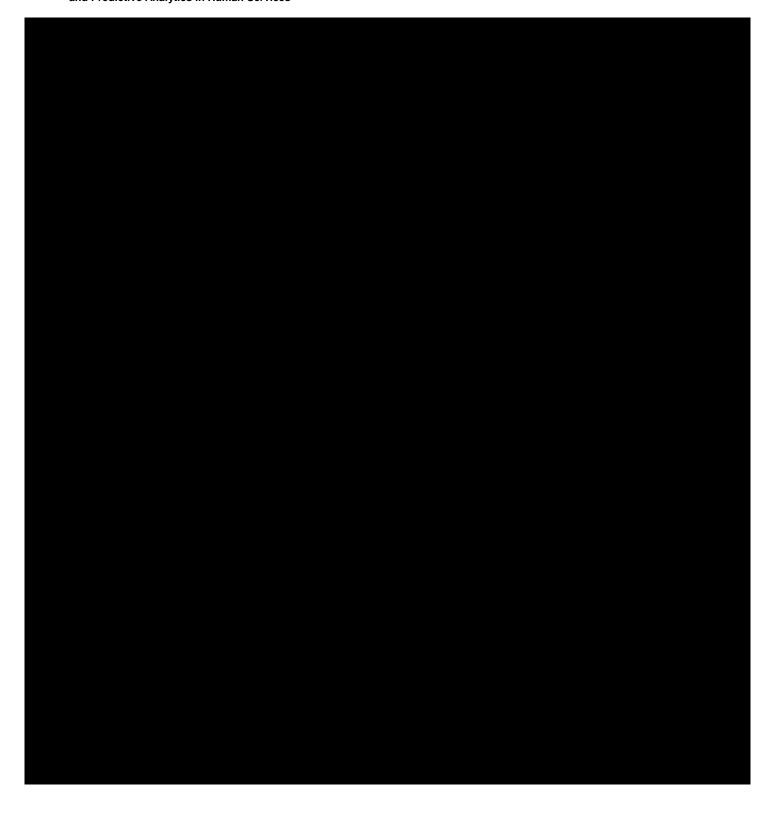




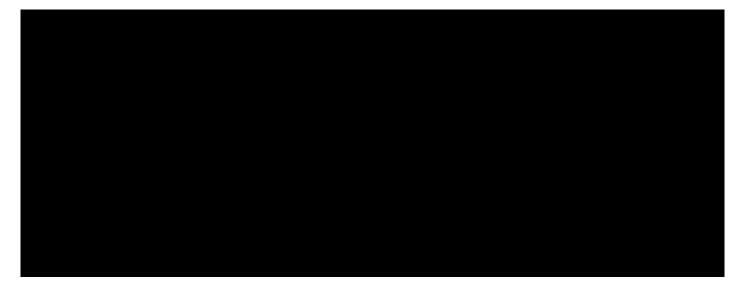




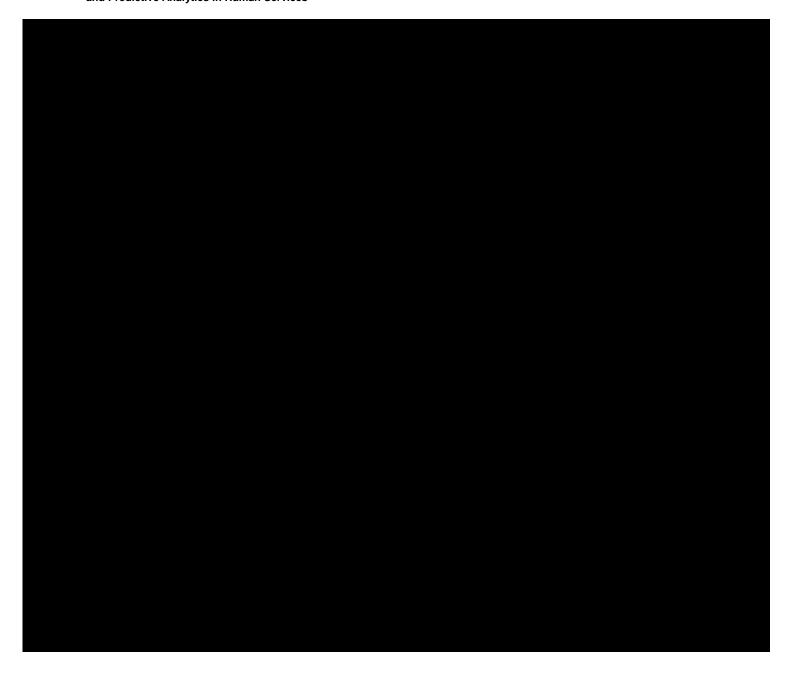


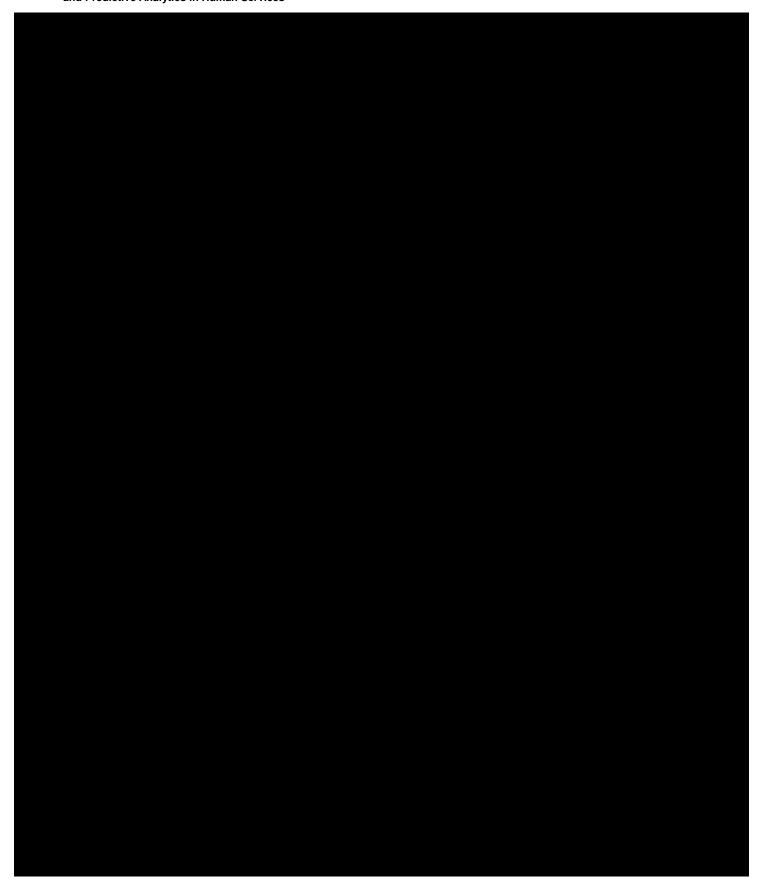




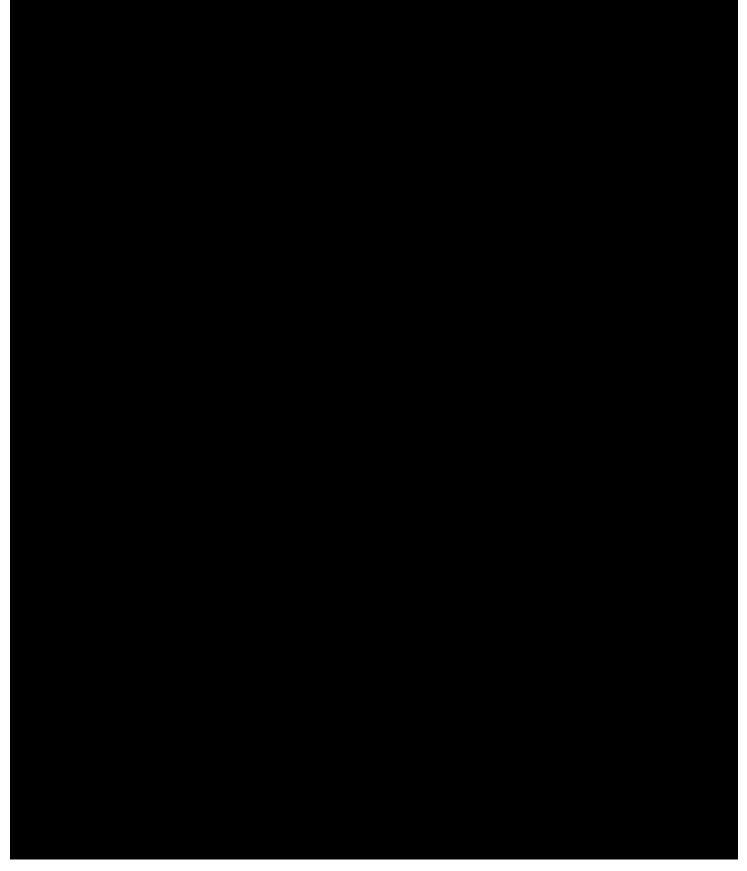


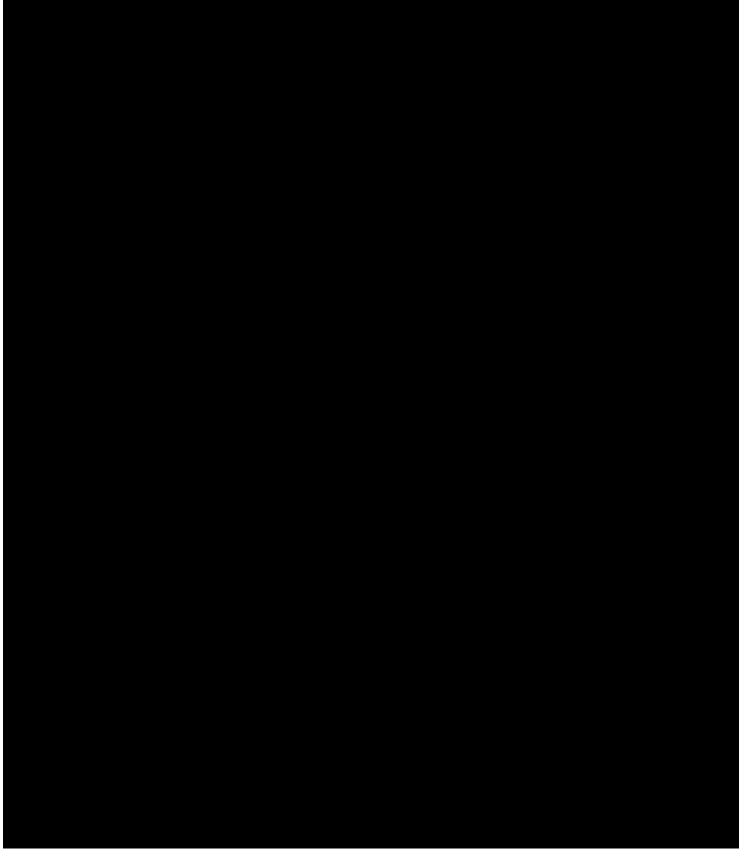


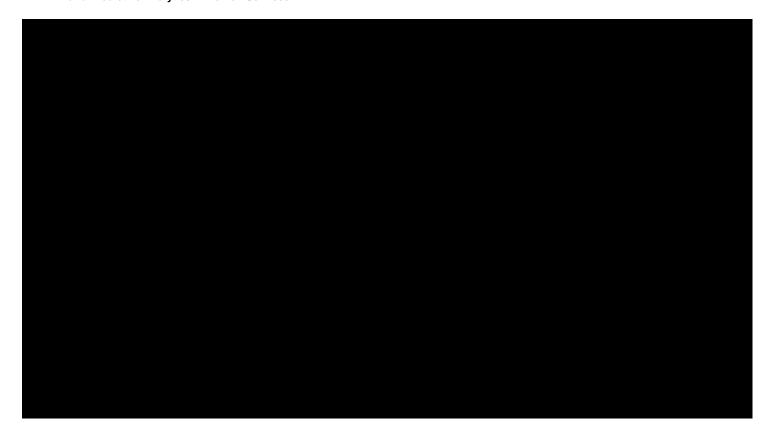






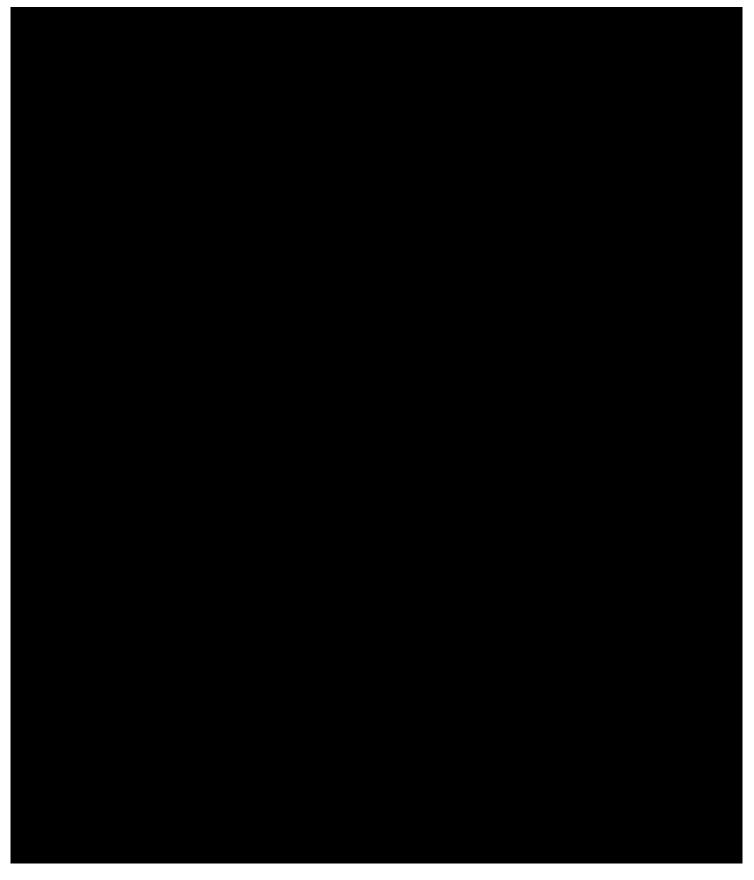


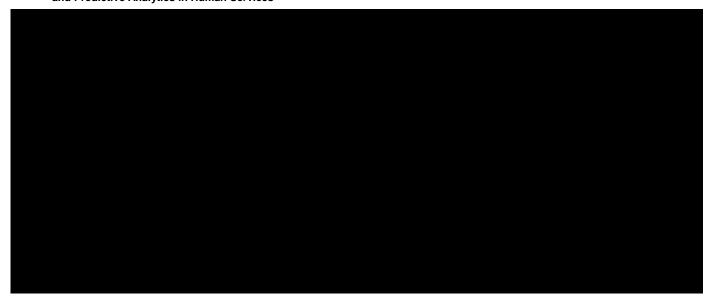


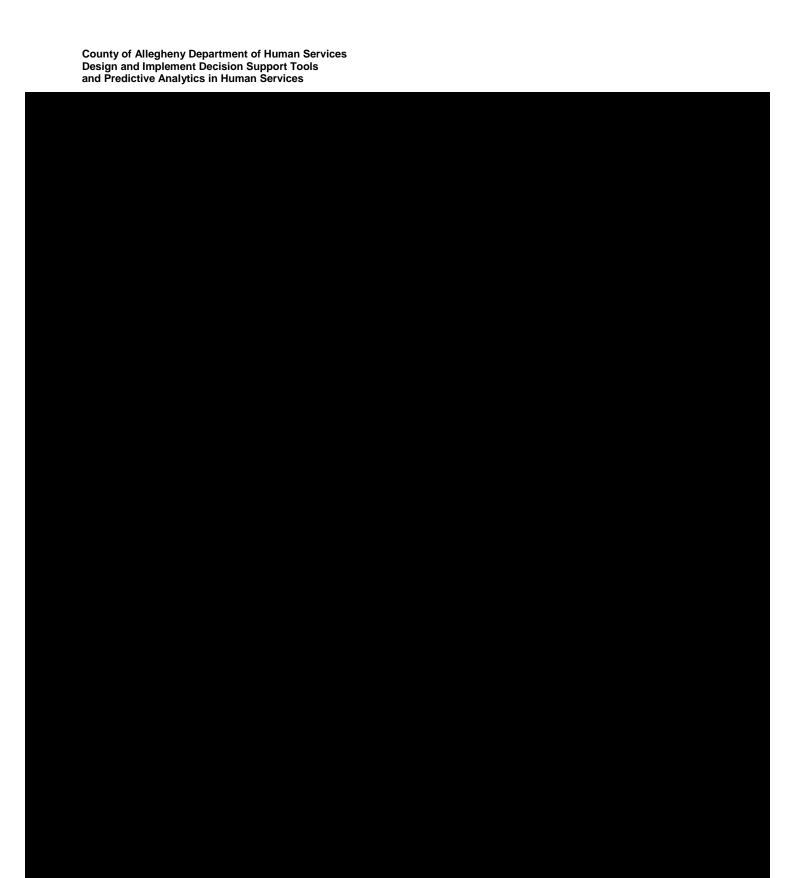






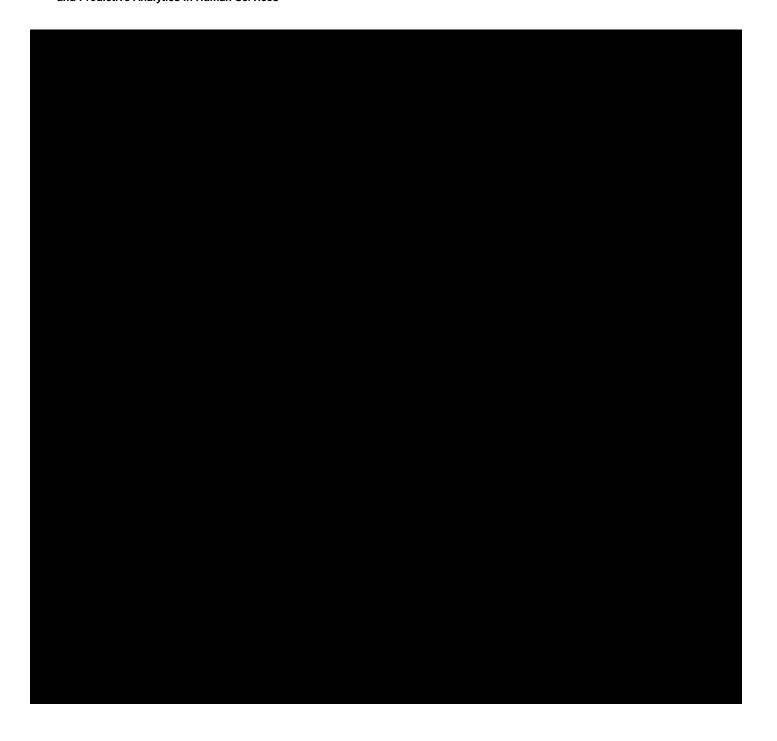












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Required Forms Appendix C

The Required forms may be found on the following pages.

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APPENDIX A Proposal Authorization Form

APPENDIX A PROPOSAL AUTHENTIFICATION FORM

TITLE: Decision Support Tools and Predictive Analytics in Human Services

DUE DATE: APRIL 18, 2014

| The undersigned hereby offers to furnish and deliver the services as specified in strict accordanged the RFQ and scope of proposal, all of which are made a part of this request. This offer is not su | bject to |
|--|----------|
| withdrawal without permission of the County of Allegheny Department of Human Services Dire | ctor. |
| FULL LEGAL COMPANY NAME: Deloitte Consulting LLP | _ |
| DOING BUSINESS AS: Deloitte Consulting LLP | |
| STREET ADDRESS: 1919 N Lynn Street | |
| CITY, STATE AND ZIP CODE: Arlington, VA 22209 | _ |
| AUTHORIZED SIGNATURE: | _ |
| PRINT NAME: | |
| TITLE OF AUTHORIZED SIGNER: Director | _ |
| TELEPHONE #:FAX #: | |
| WEBSITE URL: www.deloitte.com | |
| E-MAIL ADDRESS: | |
| COMPANY INFORMATION (This information is for tracking purposes only and has no role in the determination of the responsible proportion of the composition of the responsible proportion of the composition of the responsible proportion of the composition of the responsible proportion of the responsible prop | |
| \Box Check here if your firm is a "Minority Business Enterprise" or "MBE" as defined in the Small Businest, 15 USC | ness |
| \Box Check here if your firm is a "Women Business Enterprise" or "WBE" as defined in the Small Businest, 15 USC | ıess |
| ☐ Check here if your firm is a "Small Business" as defined by the Small Business Administration (13 121.201, in most cases, this means a business with 500 or fewer employees) NOTE: THIS PAGE MUST BE SUBMITTED WITH YOUR PROPOSAL. ALL PAGES REQUIRE A LIVE SIGNED IN BLUE INK. | |

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APPENDIX B Abbreviated Application

APPENDIX B ABBREVIATED APPLICATION

1. Primary Contacts

| | Chief Executive | Chief Information | Chief Financial Officer | Contract Processi | |
|-------------------------|--|-------------------------|---|-------------------|--|
| Name | | | | | |
| Email | c/o | | | | |
| Phone | hone c/o | | | | |
| Note: If you a | re an individual applyin | g, you may identify you | rself for all of the above r | oles. | |
| | | • | rrently under suspension er state, county or the fed | | |
| ☑ So | certified | | | | |
| 3. Have been revoked | • | een denied a performan | ce or fidelity bond, or ha | s your bond ever | |
| □ Y | es 🗹 No | | | | |
| If yes | , explain: | | | | |
| 4. Has a | 4. Has an application to be an Allegheny County provider/vendor been denied in the past? | | | | |
| □ Y | es 🗹 No | | | | |
| If yes | , explain: | | | | |
| 5. Have | you ever filed for bankr | uptcy? | | | |
| □ Y | es 🗹 No | | | | |
| · | , explain: | | | | |
| - | our paid all taxes for the imployee withheld taxes | - | it not limited to real estat f individual)? | e tax, employer | |
| ✓ Ye | es 🗆 No | | | | |
| If yes, | explain: | | | | |

| 7. | Do you have the capability to do electronic billing if required? | | | | | |
|---------------|--|--|--|--|--|--|
| | ✓ Yes □ No | | | | | |
| | If yes, explain: | | | | | |
| 8. contrac | Do you currently carry the insurance (see contract on DHS website) required to enter into a ct with DHS? | | | | | |
| | ☑ Yes □ No | | | | | |
| | If yes, explain: | | | | | |
| | Deloitte Consulting LLP maintains the insurances required by federal, state, or local statutes, including worker's compensation and employer's liability coverage. We also maintain commercial general liability and automobile liability in amounts sufficient to protect the US firms, as well as the interests of our clients, where appropriate. | | | | | |
| | Deloitte Consulting LLP maintains professional liability coverage believed to be similar to the programs of other large professional services organizations in the United States. We believe our insurance coverage is adequate to sufficiently cover the services detailed in this request for proposal. | | | | | |
| | If Deloitte Consulting LLP is awarded the work, the insurance requirements will be negotiated in good faith as part of the overall contract negotiation process. | | | | | |
| 9. | Do you/your staff have valid Pennsylvania driver licenses? | | | | | |
| | ☑ Yes □ No | | | | | |
| | If yes, explain: A number of the Deloitte Staff live and work in the Commonwealth of Pennsylvania and as such possess valid Pennsylvania Driver's Licenses | | | | | |
| | uthorized signatory for <u>Deloitte Consulting LLP</u> I hereby certify to the my knowledge and belief that the information in this proposal and application is true and accurate. | | | | | |
| Signatu | pre: Date: <u>4/17/2014</u> | | | | | |
| Print/T | ype Name:Title: <u>Director</u> | | | | | |

APPENDIX C W-9 Form

| Depart | W=9 August 2013) ment of the Treasury I Revenue Service | Request fo Identification Numb | | tion | Give Form to the requester. Do not send to the IRS. | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|
| | Name (as shown o | n your income tax return) | | | | | | | | |
| | DELOITTE CO | NSULTING LLP | | | | | | | | |
| 2 | Business name/dis | Business name/disregarded entity name, if different from above | | | | | | | | |
| Print or type Specific Instructions on page 2. | Check appropriate Individual/sole | st/estate | Exemptions (see instructions): Exempt payee code (if any) Exemption from FATCA reporting | | | | | | | |
| int | | | | 1 | code (if any) | | | | | |
| E 2 | Other (see in | structions) > street, and apt. or suite no.) | Ren | uester's name ar | nd address (optional) | | | | | |
| eci | 4022 SELLS D | | 1 | | , | | | | | |
| Sp | City, state, and ZIF | | The state of the s | | | | | | | |
| See | The second of the second of | | | | | | | | | |
| 0, | HERMITAGE, | er(s) here (optional) | | | | | | | | |
| | List account name | or(s) note (optional) | | | | | | | | |
| Pai | Toyna | yer Identification Number (TIN) | | | and the same of th | | | | | |
| | | propriate box. The TIN provided must match the nar | ne given on the "Name" line | Social secu | urity number | | | | | |
| to avo | oid backup withho ent alien, sole prop | liding. For individuals, this is your social security num prietor, or disregarded entity, see the Part I instruction over identification number (EIN). If you do not have a | ber (SSN). However, for a ns on page 3. For other | |]-[]]- | | | | | |
| Note. | . If the account is i per to enter. | in more than one name, see the chart on page 4 for g | guidelines on whose | Employer i | dentification number | | | | | |
| 1. Th | r penalties of perju ne number shown nm not subject to b | ication ury, I certify that: on this form is my correct taxpayer identification num backup withholding because: (a) I am exempt from ba m subject to backup withholding as a result of a fail. | ackup withholding, or (b) I h | ave not been no | otified by the Internal Revenue | | | | | |
| no | longer subject to | backup withholding, and r other U.S. person (defined below), and | ire to report all interest or a | ividends, or (c) | the monas notined me that i am | | | | | |
| | | entered on this form (if any) indicating that I am exem | ot from FATCA reporting is | correct. | | | | | | |
| Certifi becau intere gener | fication instruction use you have failed est paid, acquisition | ons. You must cross out item 2 above if you have been to report all interest and dividends on your tax return or abandonment of secured property, cancellation her than interest and dividends, you are not required | en notified by the IRS that y rn. For real estate transaction of debt, contributions to an | ou are currently ons, item 2 does individual retire | s not apply. For mortgage ement arrangement (IRA), and | | | | | |
| Sigr Here | | | Date ▶ | (ann u | ner 7, 2014 | | | | | |
| rack can | neral Instru | | withholding tax on foreign p 4. Certify that FATCA coo | | | | | | | |
| Future about affecti | Form W-9, at www.ing Form W-9 (such a | ne e IRS has created a page on IRS.gov for information rs.gov/w9. Information about any future developments as legislation enacted after we release it) will be posted | 4. Certify that FATCA code(s\(\)\end{price} do n this form (if any) indicating that you are exempt from the FATCA reporting, is correct. Note, if you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9. | | | | | | | |
| | nt page. Dose of Form | | Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are: | | | | | | | |
| A pers | son who is required to t taxpayer identificat | o file an information return with the IRS must obtain your tion number (TIN) to report, for example, income paid to be in settlement of payment card and third party network | An individual who is a U.S A partnership, corporation United States or under the I | , company, or as | sociation created or organized in the | | | | | |
| transa | ctions, real estate tra | ansactions, mortgage interest you paid, acquisition or properly, cancellation of debt, or contributions you made | An estate (other than a for A demostic trust (or defin | | costion 201 7701 7 ^t | | | | | |
| provid | Form W-9 only if yo | ou are a U.S. person (including a resident alien), to the person requesting it (the requester) and, when | the United States are gener 1446 on any foreign partner | nips. Partnerships ally required to pa s' share of effecti | s that conduct a trade or business in ay a withholding tax under section lively connected taxable income from | | | | | |
| to be | issued), | ou are giving is correct (or you are waiting for a number | the rules under section 144 foreign person, and pay the | 6 require a partne section 1446 wit | re a Form W-9 has not been received, ership to presume that a partner is a hholding tax. Therefore, if you are a | | | | | |
| 3. C | Claim exemption from | at subject to backup withholding, or backup withholding if you are a U.S. exempt payee. If writifying that as a U.S. person, your allocable share of orn a U.S. trade or business is not subject to the | United States, provide Forn | W-9 to the partr | conducting a trade or business in the nership to establish your U.S. status share of partnership income. | | | | | |
| | | Cat. No. | 10231X | | Form W-9 (Rev. 8-2013) | | | | | |

APPENDIX D Vendor Creation Form

APPENDIX D

| Allegheny County | Controller's use only: | | | |
|--|-------------------------------|--|--|--|
| Vendor Creation Form | Supplier No | | | |
| | 1099 Eligibility: Yes No | | | |
| Add Change Supplier No. <u>571863</u> | | | | |
| Company Information: | Federal Tax ID (TIN) | | | |
| Deloitte Consulting LLP | 06-1454513 | | | |
| Company Name (Please type or print) | Original W-9 must be attached | | | |
| Required information | Type of Commodity Provided | | | |
| Type of Service Provided | (please describe below) | | | |
| ☐ Independent Contractor ☐ Rent ☐ Maintenance/Service Agreement ☐ Care ☐ Insurance ☐ Lega ☐ Personal Reimbursement ☐ Med | Giver | | | |
| Other (please list) | | | | |
| Required Information | | | | |
| Minority Or Women Owned | Yes No | | | |
| If yes select ethnicity and gender of the vendor below: | | | | |
| Asian Pacific American Black American Hispanic American Native American Subcontinent Asian American Non-Minority Woman Other | | | | |
| If Yes Male Female | | | | |
| Certified By: PAUCP PA | DGS Non PA Certification | | | |
| (attach copy of certification) Non-Profits including Faith Based Organizations Faith Based Non-Minority Faith Based Minority African American Non-Profit Other Non-Profit | | | | |

| APPENDIX D | | | | | | | |
|---|--|--|--|--|--|--|--|
| Industry Classification by NAICS Code | | | | | | | |
| Primary Industry | | | | | | | |
| Secondary Industry (if applicable) | | | | | | | |
| *If code is not known go to http://www.census.gov/epcd/naics02/nai | cod02.htm and select the correct code. | | | | | | |
| Supplier Information (Search Type "P") - (Where | PO should be sent to place | | | | | | |
| order) Please type or print | | | | | | | |
| Company Name | Telephone Number | | | | | | |
| Address Line 1 | Fax Number | | | | | | |
| Address Line 2 | | | | | | | |
| Address Line 3 | | | | | | | |
| City | State | | | | | | |
| ZIP Code | | | | | | | |
| | | | | | | | |
| Required Information Supplier / Remit To Information (Search Type "V") — (Where check will be mailed for payment. Check must be made payable to exact name listed under TIN provided or check cannot be processed.) Please print or type | | | | | | | |
| Supplier/Payee Name | | | | | | | |
| Address Line 1 | | | | | | | |
| Address Line 2 | | | | | | | |
| Address Line 3 | | | | | | | |
| City | State | | | | | | |
| ZIP Code | | | | | | | |
| | | | | | | | |
| Telephone Number | | | | | | | |

*If the "remit to" information provided on form does not match invoices submitted for payment, the Controller's Office MUST contact supplier to verify address information before payments are processed. Thank you for your cooperation.

If the Allegheny County Department with which you do business is known, providing the information below will help in the processing of your payments. Failure to include the information may result in processing delays.

| Departmenta | l Contact | Supplier/Payee (| Contact Name |
|-------------------|---------------------------------------|---------------------|--------------|
| Name | Leslie Lewis-Pollard | Name | |
| Telephone No. | 412-350-5663 | Telephone No. | |
| ax No. | 412-350-3414 | - Fax No. | |
| Email Address: | Llewis- pollard@alleghenycounty.us | – Email Address: | |

APPENDIX E MBE/WBE Forms

| | COUNTY OF ALLEGHENY | | | | | | | |
|--|---------------------|---------------------|--------------------|------------------------|----------------------------------|---|--|--|
| M/W/DBE PARTICIPATION STATEMENT | | | | | | | | |
| Failure to complete this form and submit it with your contract may cause delays in processing SOLICITATION AND COMMITMENT | | | | | | | | |
| MINORITY, WOMEN AND DISADVANTAGED BUSINESS ENTERPRISES | | | | | | | | |
| FISCAL YEAR/PERIOD NAME OF PROVIDER ADDRESS PHONE NUMBER | | | | | | PHONE NUMBER | | |
| 2014 Deloi | | | 00 Corporate Cente | | | | | |
| | ow ALL M/W/DBE's | | | | obtained – Copy this form as neo | | | |
| MBE WBE DBE | | TYPES OF SUBCONTRAC | DATE SOL | ICITED | COMMITMENT MADE | GIVE REASON(S) IF NO COMMITMENT MADE | | |
| CERTIFIED BY: COMPANY NAME | | | SOLICITATIO | METHOD | ☐ YES ☐ NO | COMMITMENT MADE | | |
| COMPANY NAME | | | SOLICITATIO | METHOD | (IF YES GIVE DATE) MO DAY YR | | | |
| ADDRESS | | | | | INC BAT IN | - | | |
| | | | | | AMOUNT COMMITTED | | | |
| CONTACT PERSON/PHONE | | | | | | | | |
| | | | | | % OF TOTAL BID | | | |
| EMAIL | | | QUOTE RE | | | 4 | | |
| | | | ☐ YES | | | | | |
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COUNTY OF ALLEGHENY M/W/DBE PARTICIPATION WAIVER REQUEST

| PROVIDER | Deloitte Consulting |
|---------------------------|--|
| ADDRESS | 300 Corporate Center Drive, Camp Hill, PA 17011 |
| CONTACT PERSON | |
| TELEPHONE NUMBER | |
| EMAIL ADDRESS | |
| FISCAL YEAR/PERIOD | 2014 |
| | |
| In all instances a good f | aith effort must be made to meet the M/W/DBE contract goals as outlined in Section 3.10.8.8 of |

the "Minority and Women Business Enterprise Utilization Affirmative Action Requirements" document.

If you plan to perform the entire contract without using M/W/DBE subcontractors and/or suppliers or have not completely met the M/W/DBE goal of 13% MBE 2% WBE, the following must be attached and submitted with this form:

- * A detailed explanation of your normal business practice
- * Operation and/or Inventory Profile
- * An active company supplier/subcontractor diversity policy
- * Explanation as to why M/W/DBE participation waiver is being requested

| Note: The fully completed M/V Faith Effort" | V/DBE | Participation | Statement must | accompany t | this waiver r | equest, that shows your "(| Good |
|---|--------|---------------|----------------|-------------|---------------|----------------------------|------|
| Prepared By: | Title: | Director | Date: | 4/16/2014 | Signatui | | |

County of Allegheny Dept of Human Services M/W/DBE Participation Waiver Request from Deloitte 4/18/2014

Submitted for RFP: Decision Support Tools and Predictive Analytics

Detailed Explanation of Normal Business Practice

Deloitte is committed to providing our clients the best service, and we firmly believe in attracting the brightest and best experienced professionals. Deloitte actively works with minority, women, and disadvantaged businesses to develop partnership relationships to mutually learn and benefit from each other. As part of our ongoing relationships, Deloitte provides experience and business knowledge to help our small business partners grow and be successful. We have a mentorship program that provides each small business partner with an experienced Deloitte professional, who serves as a mentor, and a program that assesses and helps the business develop and grow based on industry metrics.

Deloitte has benefitted from qualified perspectives and experience offered by business partners in our engagements, and we are committed to growing these relationships. We believe that a vibrant and highly qualified small business network is a key component of our ability to deliver value to our clients. Deloitte is committed to developing business partnerships with minority, women and disadvtanged businesses. The success of these groups is a priority to the firm.

Operation and/or Inventory Profile

In the United States, Deloitte LLP and its subsidiaries have 57,000 professionals with a single focus: serving our clients and helping them solve their toughest problems. We work in four key business areas — audit, financial advisory, tax and consulting — but our real strength comes from combining the talents of those groups to address clients' needs.

"Deloitte" is the brand under which tens of thousands of dedicated professionals in independent firms throughout the world collaborate to provide audit, consulting, financial advisory, risk management and tax services to select clients. These firms are members of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL").

An active company supplier/contractor diversity profile

Deloitte Supplier Diversity Program

Part of our commitment to an inclusive environment entails broadening the base of suppliers from whom we purchase goods and services. Our transactions with minority- and women-owned businesses have a wide reach throughout the country. In many instances, our clients are encouraging and challenging their suppliers to keep pace and add value to their respective supplier diversity initiatives and strategies. Our success and competitive advantage will not be limited to spending, but in our ability to broaden the scope of relationships among existing and future business alliances. The Supplier Diversity Program strategic plan consists of three phases:

• Maintaining an infrastructure that consists of a managed supplier database to enable both internal users and potential suppliers to inquire about our program through our Web site

- Reviewing business opportunities with new suppliers for strategic alliance arrangements, and growing second-tier participation with key prime suppliers. In addition, developing an "extended reach" program that will include regional office participation in making a contribution to the national strategy
- Conducting educational and training programs throughout the organization to increase the awareness and importance of supplier diversity as a long-term business strategy

Year after year, Deloitte is ranked in or near the top 10 on DiversityInc magazine's Top 50 Companies for Diversity list. In 2013, we also were named No. 1 for Asian Americans and among the top 10 companies for Latinos, executive women, LGBT employees, and global diversity. This annual award recognizes companies that demonstrate measurable results in leadership commitment, human capital metrics, corporate and organizational communications and supplier diversity.

Supplier Diversity Policy Statement

The Strategic Procurement Services Supplier Diversity mission and vision are as follows:

- To develop a comprehensive supplier diversity portfolio that reflects the diversity of our marketplace and contributes to the success of the organization
- To be a recognized leader in the professional services industry for supplier diversity

Explanation as to why M/W/DBE Participation Waiver is Being Requested

The nature of the services required by Allegheny County are highly specialized and require the use of specific Deloitte methodologies.